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FOUR NEW SPECIES OF CHALCIDOIDEA PARASITIC ON
CACTUS INSECTS

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THE following apparently new species of parasitic Hymenoptera were all reared by representatives of the Australian Prickly Pear Board in the course of their extensive investigations of cactus insects in Texas and Mexico during the past several years.

Family CALLIMOMIDAE

Genus CALLIMOME Spinola

CALLIMOME BIFASCIIPENNIS, new species

Differs from all other known North American members of the genus by having two very distinct brownish fasciae on the forewing, one adjacent to the venation at the point of union of submarginal and marginal veins, the other and larger one abutting on the apical one-third of marginal vein adjacent to the stigmal vein and extending obliquely distocaudad to the middle of the wing as a moderately broad and nearly uniform transverse stripe.

Female.—Length, excluding ovipositor, 3 mm; ovipositor sheaths 4.3 mm. Head strongly transverse, somewhat broader than thorax at tegulae; vertex and frons with fine alveolate sculpture; face with a weak median ridge, weakly reticulated and also covered with broad shallow indentations, which are arranged in more or less

irregular transverse rows, each pit bearing a conspicuous appressed silvery-white hair at its center; antennal scape cylindrical, pedicel a little shorter than first funicle joint, ring joint as long as broad, first to fifth funicle joints longer than broad, sixth and seventh funicle joints quadrate, club about as long as two preceding funicle joints and slightly broader than funicle; malar space equal to a little less than half the eye height; ocellular line a little longer than the diameter of an ocellus. Mesoscutum, scutellum, and axillae with fine and nearly uniform alveolate sculpture, the scutellum with a delicate cross furrow; propodeum practically smooth and without carinae; mesepimeron and metapleuron smooth and polished; hind coxae outwardly strongly sculptured; stigmal vein sessile, postmarginal nearly twice as long as stigmal and about one-sixth as long as marginal; abdomen about as long as head and thorax, narrower than thorax, very faintly sculptured, the first to fifth tergites deeply emarginate apically. Head above and dorsum of thorax dull brassy green; face dull purplish; occiput and temples a little brighter metallic green than vertex; scape testaceous; flagellum brownish black; pronotum bluish; pleura violaceous; mesosternum black; propodeum shining green; posterior coxae strongly violaceous, the anterior and median pairs less strongly so; all femora dark brownish, with a slight metallic luster; all tibiae and tarsi testaceous; wings hyaline except for the two brownish fasciae already described; abdomen above bright green basally, beyond the first tergite and beneath aeneous black; ovipositor sheaths black.

Male.—Length 2.45 mm. Similar to the female except that the abdomen is about as long as the thorax, the scape is rather strongly tinged with metallic, and the pleura not so strongly violaceous.

Type locality.—Mexico City, Mexico.

Type.—U.S.N.M. no. 51447.

Described from five females and one male, said to have been reared in April 1928 by L. H. Hitchcock from *Phytophaga* sp. infesting *Opuntia*.

Family EURYTOMIDAE

Genus RILEYA Ashmead

RILEYA OPUNTIAE, new species

In the key to species of the genus *Rileyia* published by me in 1918,¹ this species runs directly to couplet 14 and of the two species occurring in that category agrees best with *similaris* Gahan. It differs from *similaris* by having the parapsidal grooves effaced, the striations of face stronger and extended upward somewhat beyond the lower margin of the antennal depression, the antennal flagellum dis-

¹Proc. Ent. Soc. Washington, vol. 20, p. 137, 1918.

tinctly a little longer and less robust, the first funicle joint a little longer than broad, the second and third joints about as long as broad, the fourth and fifth somewhat broader than long. It may be distinguished at once from *americana* Girault by the fact that the distance between the posterior ocelli is distinctly longer than the distance between the lateral ocellus and the eye margin.

Female.—Length 3.4 mm. Face medially weakly shagreened, somewhat shining except immediately below the antennal fossae; sides of face with strong striae, which converge at the anterior margin on either side of the clypeus; frons, vertex, occiput, temples, and cheeks strongly shagreened; carina separating face from cheeks strong and continued upward along the posterior eye margin nearly to top of eyes, the space between it and the eye very finely transversely striated; carina separating cheeks and temples from occiput also strong and bordered by a foveolate groove; ocellocular line equal to about one and one-half times the diameter of an ocellus, about two-thirds as long as postocellar line. Thorax dorsally sculptured like the head; prothorax strongly convex, longer than mesoscutum, its dorsal aspect separated from the pleural aspect by a weakly carinate line; parapsidal grooves entirely absent; scutellum with a distinct transverse ridge or fold at about its apical third, this fold sometimes interrupted medially; propodeum with a strong transverse carina, the area in front of this carina divided at the middle by a short median longitudinal carina and each half again divided by a curved carina about halfway between the spiracle and the median line, the area behind the transverse carina nearly uniformly coarsely longitudinally striated. Postmarginal vein about twice as long as stigmal and about three-fourths as long as marginal. Abdomen distinctly longer than head and thorax, acuminate at apex; first tergite nearly circular and perfectly smooth, second about one-fourth as long as first and also smooth, third approximately twice as long as second and distinctly finely reticulated; fourth distinctly longer than the three preceding combined and uniformly finely reticulated, fifth and sixth subequal, each about as long as the third and sculptured like the fourth; seventh a little longer than the sixth, sharply triangular; ovipositor tip barely exposed. Scape, mandibles, palpi, tegulae, trochanters, apical one-third to one-half of all femora, all tibiae, and all tarsi testaceous, the tarsal claws dark; abdomen basally beneath more or less brownish; wings hyaline, the venation brownish testaceous; remainder of insect dull black.

Male.—Unknown.

Type locality.—Uvalde, Tex.

Type.—U.S.N.M. no. 51448.

Described from five females, said to have been reared from *Asphondylia opuntiae* Felt in April 1928 by L. H. Hitchcock.

Family PTEROMALIDAE

Genus NEOCATOLACCUS Ashmead

NEOCATOLACCUS MONEILEMAE, new species

Similar in size, shape, and general appearance to *N. tylodermae* Ashmead but distinguished at once by the partially carinate margin of the pronotum, the much more delicate transverse carina on the propodeum, and the much less conspicuous vestiture of the thorax, the hairs being slenderer and nearly straight, not coarse and recurved or recumbent as in *tylodermae*.

Female.—Length 4 mm. Head strongly transverse, a little broader than thorax at tegulae, strongly and nearly evenly alveolately sculptured except the clypeal region, which is convergently striated; clypeus with distinct median sinus; right mandible quadridentate, the left tridentate; malar space equal to about half the eye height, malar groove absent or very indistinct; ocelli in a low triangle, the ocellocular line equal to a little more than twice the diameter of an ocellus; antennae inserted at middle of head; scape cylindrical; pedicel about twice as long as thick at apex; three very distinct transverse ring joints; funicle 5-jointed, the first joint longer than pedicel and more than twice as long as thick, following joints successively decreasing in length, the fifth a little longer than thick; club 3-jointed, not broader than the funicle and about equal in length to the two preceding funicle joints. Thorax sculptured like the head, moderately robust; pronotum strongly transverse, sharply carinately margined anteriorly at the middle, the carina fading out laterally before attaining the dorsolateral margins; mesoscutum much broader than long with parapsidal grooves sharply impressed for about two-thirds its length, absent posteriorly; scutellum about as broad as long, rounded at apex, and immargined; propodeum a little less than half as long as scutellum, alveolately sculptured but the alveolae not quite so deep as on scutellum and mesoscutum, with a distinct median longitudinal carina, and a delicate more or less obscure and somewhat sinuous transverse fold extending across the middle and terminating at the lateral folds, the latter represented anteriorly by a large and moderately deep depression on each side about midway between the spiracle and the median longitudinal carina; mesopleura sculptured like the mesonotum; metapleura and hind coxae sculptured about like propodeum; hind tibia with two spurs, the inner of which is a little longer than the outer; forewings not reaching to apex of abdomen, the stigmal vein a little less than half as long as marginal, postmarginal equal to about two-thirds of marginal; abdomen pointed ovate, distinctly longer than head and thorax, as broad as thorax, the first tergite polished, following tergites weakly lineolated and shining; ovipositor sheaths barely extending beyond

apex of seventh tergite. Vestiture of head and thorax consisting of moderately long grayish hairs which are mostly straight and not at all flattened, only those on the frons somewhat recurved. Color of head and thorax greenish black; mesoscutum and scutellum dull black medially, the scapulae, median lobe of mesoscutum laterally, axillae, and scutellum laterally faintly tinged with greenish; propodeum and metapleura distinctly greenish; mesopleura mostly black; wings hyaline, venation brownish, tegulae testaceous, all coxae concolorous with the thorax; femora brownish testaceous, the posterior pair usually more or less metallic on basal half or two-thirds; tibiae and tarsi all reddish testaceous; antennal flagellum black, scape and pedicel reddish testaceous; abdomen above tinged with green on first tergite, the rest of dorsum bright copper-colored; ventral side less strongly copper-colored.

Male.—Length 3 mm. Antennae with only two ring joints, the funicle 6-jointed; first funicle joint about as long as pedicel, a little longer than broad, second a little longer than first but slightly shorter than third, which is nearly twice as long as broad, fourth and fifth subequal and each about as long as second, sixth joint a little shorter than preceding; club 3-jointed, about as long as two preceding funicle joints and not thicker than funicle; ocellular line not quite as long as the long diameter of a lateral ocellus; propodeum a little longer than half the length of scutellum, the transverse carina or fold very distinct, the median longitudinal carina usually weak or incomplete; abdomen about as long as thorax, not as broad as thorax, subelliptical, with a short smooth petiole. Antennal scape, pedicel, and first five funicle joints testaceous; sixth joint of funicle and the club dark brown or blackish; abdomen with a pale spot embracing apex of first, all of second, and base of third tergites. Otherwise like the female.

Type locality.—Uvalde, Tex.

Type.—U.S.N.M. no. 51449.

Described from 26 females and 7 males reared from cocoons of *Mo-neilema ulkei* Horn, June 8, 1929, by R. C. Mundell.

Family EULOPHIDAE

Genus TETRASTICHUS Haliday

TETRASTICHUS GERSTAECKERIAE, new species

Females of this species are distinguished with difficulty from those of *T. malacosomae* Girault but apparently differ by having the antennal depression (scrobes) divided medially by a low sharp ridge extending from between the bases of the antennae to the upper extremity of the depression and by having the apex of the forewing evenly rounded and with a very short marginal fringe. In all the 24 specimens of *malacosomae* available for examination the head is col-

lapsed, but apparently the scrobes are not at all separated, while the forewing is rather abruptly rounded or subtruncate at apex, and the marginal fringe is not especially short, being approximately half as long as the stigmal vein. The males may be distinguished at once from those of *malacosomae* by the fact that the scape is distinctly thicker and the flagellum shorter.

Female.—Length 2 mm. Moderately slender and elongate, the abdomen more than one and one-half times as long as head and thorax combined. Antennal scape normal; pedicel a little more than twice as long as thick at apex; ring joints minute; first funicle joint about as long as pedicel, second and third funicle joints subequal and each a little shorter than the first; club 3-jointed, very slightly thicker than funicle and in length subequal to the two preceding funicle joints. Head nearly uniformly sculptured; cheeks very nearly as long as height of eyes; ocellular line about equal to diameter of an ocellus. Thorax dorsally with fine, irregular, shallow lineation, more or less shining medially; median groove on mesoscutum distinct; propodeum medially smooth and very short, laterally weakly sculptured and longer; forewings not reaching to apex of abdomen, evenly rounded at apex, the marginal fringe much shorter than half the length of stigmal vein; postmarginal vein entirely absent. Abdomen fully twice as long as thorax, acute at apex, weakly sculptured and thickly studded with rather conspicuous, pale, stiff hairs; ovipositor extending a little beyond apex of seventh tergite which is acutely triangular. Head, thorax, and abdomen brownish black, distinctly but not strongly tinged with metallic green; scape pale yellowish, flagellum brownish testaceous, the pedicel dark brown above; mandibles, clypeus, and narrow oral margin reddish; wings hyaline, venation testaceous, tegulae dark; all coxae and femora concolorous with the thorax; trochanters, apices of all femora, all tibiae, and tarsi pale yellowish; ovipositor sheaths black.

Male.—Length 1.5 mm. Antennal scape distinctly thickened, approximately three times as long as broad, deeply channeled beneath for its whole length; funicle 4-jointed, the first joint about equal to the pedicel in length, about one and one-half times as long as broad; second joint subequal to the first; third and fourth joints subequal and subquadrate; club as long as two preceding joints; forewings extending distinctly beyond apex of abdomen; abdomen ovate, about as long as head and thorax. Other characters as in the female except that the scape is entirely fuscous.

Type locality.—Texas, probably Uvalde.

Type.—U.S.N.M. no. 51450.

Described from three females and one male reared in June 1929 from *Gerstaeckeria porosa* LeConte.